Supplementary Table 1. Child sex and socioeconomic differences across study variables.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Males | Females | *t (df)* | *p* | Neither Parent Has a 4-Year College Degree | At Least One Parent Has a 4-Year College Degree | *t (df)* | *p* |
|  | *M (SD)* | *M (SD)* |  |  | *M (SD)* | *M (SD)* |  |  |
| Irritability age 3 | 1.58 (1.44) | 1.76 (1.43) | -1.45 (545) | .147 | 1.77 (1.36) | 1.61 (1.48) | -1.19 (544) | .237 |
| Irritability age 6 | .98 (1.19) | .97 (1.24) | .16 (465) | .870 | 1.14 (1.30)  | .90 (1.16) | -1.99 (275) | .048 |
| Irritability age 9 |  1.03 (1.35) | .78 (1.19) | 2.12 (488) | .035 | 1.08 (1.37) | .83 (1.24) | -2.00 (485) | .046 |
| Irritability age 12 | .80 (1.20) | .71 (1.17) | .81 (470) | .418 | .82 (1.22) | .72 (1.17) | -.90 (468) | .367 |
| Irritability age 15 | .68 (1.10) | .71 (1.14) | -.29 (452) | .773 | .73 (1.11) | .66 (1.11) | -.61 (450) | .541 |
| Depression age 3 | 52.54 (11.36) | 52.92 (11.77) | -.384 (547) | .701 | 54.32 (11.66) | 51.97 (11.44) | -2.23 (546) | .027 |
| Depression age 6 | 48.67 (10.10) | 47.74 (6.83) | 1.18 (454) | .238 | 50.11 (11.28) | 47.33 (7.14) | -2.79 (215) | .006 |
| Depression age 9 | 49.31 (10.26) | 48.03 (8.40) | 1.5 (489) | .134 | 49.84 (10.69) | 48.15 (8.77) | -1.75 (277) | .082 |
| Depression age 12 | 48.58 (9.80) | 45.95 (6.75) | 3.44 (445) | .001 | 47.86 (9.13) | 47.04 (8.32) | -.96 (468) | .063 |
| Depression age 15 | 48.11 (9.36) | 48.85 (10.68) | -.79 (452) | .430 | 48.92 (10.79) | 48.10 (9.35) | -.81 (450) | .416 |
| Anxiety age 3 | 51.52 (11.59) | 50.94 (10.65) | .61 (547) | .539 | 52.82 (12.43) | 50.53 (10.44) | -2.12 (296) | .035 |
| Anxiety age 6 | 49 (10.43) | 45.93 (9.02) | 3.42 (464) | .001 | 49.04 (11.65) | 46.96 (8.93) | -1.96 (244) | .052 |
| Anxiety age 9 | 49.32 (11.62) | 47.7 (11.45) | 1.55 (489) | .121 | 50.60 (13.30) | 47.62 (10.49) | -2.50 (268) | .013 |
| Anxiety age 12 | 47.57 (9.85) | 47.58 (10.65) | -.01 (470) | .989 | 47.37 (10.20) | 47.65 (10.24) | .27 (468) | .787 |
| Anxiety age 15 | 46.47 (9.07) | 47.44 (10.49) | -1.05 (429) | .293 | 47.10 (9.34) | 46.81 (9.98) | -.29 (450) | .776 |
|  ADHD age 3 | 48.28 (8.84) | 47.7 (9.31) | .76 (548) | .450 | 49.44 (8.70) | 47.36 (9.16) | -2.51 (547) | .012 |
| ADHD age 6 | 45.07 (7.89) | 45.57 (7.95) | -.68 (467) | .498 | 46.54 (8.00) | 44.67 (7.83) | -2.41 (465) | .016 |
| ADHD age 9 | 45.86 (8.70) | 46.03 (8.78) | -.21 (489) | .834 | 47.13 (8.21) | 45.33 (8.96) | -2.16 (486) | .031 |
| ADHD age 12 | 46.74 (9.80) | 46.95 (9.28) | -.24 (470) | .812 | 47.83 (9.74) | 46.32 (9.43) | -1.60 (468) | .111 |
| ADHD age 15 | 44.93 (8.84) | 45.98 (9.23) | -1.24 (452) | .217 | 46.46 (9.14) | 44.88 (8.91) | -1.73 (450) | .085 |
| Defiance age 6 | 1.30 (1.34) | .99 (1.18) | 2.67 (459) | .008 | 1.27 (1.30) | 1.10 (1.26) | -1.34 (462) | .181 |
| Defiance age 9 | 1.33 (1.30) | 1.01 (1.13) | 2.86 (488) | .004 | 1.43 (1.24) | 1.06 (1.21) | -3.13 (486) | .002 |
| Defiance age 12 | 1.04 (1.30) | .71 (.88) | 3.18 (443) | .002 | .99 (1.26) | .83 (1.07) | -1.43 (467) | .154 |
| Defiance age 15 | .81 (1.15) | .68 (1.03) | 1.28 (452) | .200 | .84 (1.14) | .69 (1.05) | -1.38 (450) | .168 |

|  |
| --- |
| Supplementary Table 2.*Bivariate correlations between study variables.*  |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 1. Irritability age 3
 |  - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Depression age 3
 | .49\*\* |  - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Anxiety age 3
 | .43\*\* | .56\*\* |  - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. ADHD age 3
 | .57\*\* | .46\*\* | .34\*\* |  - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Irritability age 6
 | .51\*\* | .30\*\* | .27\*\* | .38\*\* |  - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Depression age 6
 | .25\*\* | .35\*\* | .33\*\* | .27\*\* | .44\*\* |  - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Anxiety age 6
 | .31\*\* | .31\*\* | .47\*\* | .31\*\* | .38\*\* | .53\*\* |  - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. ADHD age 6
 | .27\*\* | .19\*\* | .15\*\* | .46\*\* | .46\*\* | .37\*\* | .29\*\* |  - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Defiance age 6
 | .37\*\* | .24\*\* | .24\*\* | .45\*\* | .58\*\* | .27\*\* | .30\*\* | .60\*\* |  - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Irritability age 9
 | .39\*\* | .32\*\* | .27\*\* | .35\*\* | .49\*\* | .24\*\* | .25\*\* | .32\*\* | .42\*\* |  - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Depression age 9
 | .27\*\* | .35\*\* | .29\*\* | .24\*\* | .37\*\* | .42\*\* | .33\*\* | .30\*\* | .25\*\* | .53\*\* |  - |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Anxiety age 9
 | .31\*\* | .32\*\* | .35\*\* | .30\*\* | .29\*\* | .31\*\* | .49\*\* | .25\*\* | .22\*\* | .51\*\* | .56\*\* |  - |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. ADHD age 9
 | .28\*\* | .26\*\* | .17\*\* | .48\*\* | .36\*\* | .25\*\* | .21\*\* | .68\*\* | .49\*\* | .47\*\* | .44\*\* | .41\*\* |  - |  |  |  |  |  |  |  |  |  |  |  |
| 1. Defiance age 9
 | .30\*\* | .24\*\* | .16\*\* | .34\*\* | .44\*\* | .22\*\* | .20\*\* | .39\*\* | .56\*\* | .62\*\* | .37\*\* | .37\*\* | .55\*\* |  - |  |  |  |  |  |  |  |  |  |  |
| 1. Irritability age 12
 | .37\*\* | .24\*\* | .19\*\* | .32\*\* | .46\*\* | .22\*\* | .24\*\* | .24\*\* | .38\*\* | .58\*\* | .35\*\* | .33\*\* | .34\*\* | .46\*\* |  - |  |  |  |  |  |  |  |  |  |
| 1. Depression age 12
 | .22\*\* | .28\*\* | .22\*\* | .21\*\* | .27\*\* | .23\*\* | .20\*\* | .16\*\* | .20\*\* | .37\*\* | .49\*\* | .34\*\* | .22\*\* | .25\*\* | .52\*\* |  - |  |  |  |  |  |  |  |  |
| 1. Anxiety age 12
 | .19\*\* | .16\*\* | .22\*\* | .25\*\* | .17\*\* | .21\*\* | .36\*\* | .20\*\* | .18\*\* | .26\*\* | .32\*\* | .58\*\* | .26\*\* | .17\*\* | .37\*\* | .47\*\* |  - |  |  |  |  |  |  |  |
| 1. ADHD age 12
 | .19\*\* | .19\*\* | .11\* | .40\*\* | .30\*\* | .24\*\* | .18\*\* | .54\*\* | .43\*\* | .35\*\* | .36\*\* | .30\*\* | .72\*\* | .45\*\* | .42\*\* | .38\*\* | .36\*\* |  - |  |  |  |  |  |  |
| 1. Defiance age 12
 | .29\*\* | .18\*\* | .16\*\* | .27\*\* | .42\*\* | .20\*\* | .16\*\* | .32\*\* | .55\*\* | .46\*\* | .24\*\* | .20\*\* | .38\*\* | .58\*\* | .65\*\* | .46\*\* | .24\*\* | .51\*\* |  - |  |  |  |  |  |
| 1. Irritability age 15
 | .31\*\* | .23\*\* | .15\*\* | .31\*\* | .34\*\* | .17\*\* | .15\*\* | .19\*\* | .28\*\* | .45\*\* | .27\*\* | .21\*\* | .29\*\* | .38\*\* | .56\*\* | .35\*\* | .23\*\* | .26\*\* | .42\*\* |  - |  |  |  |  |
| 1. Depression age 15
 | .21\*\* | .20\*\* | .09 | .23\*\* | .22\*\* | .27\*\* | .19\*\* | .16\*\* | .15\*\* | .22\*\* | .44\*\* | .29\*\* | .24\*\* | .22\*\* | .32\*\* | .55\*\* | .37\*\* | .33\*\* | .29\*\* | .45\*\* |  - |  |  |  |
| 1. Anxiety age 15
 | .24\*\* | .17\*\* | .21\*\* | .29\*\* | .16\*\* | .22\*\* | .28\*\* | .22\*\* | .17\*\* | .22\*\* | .31\*\* | .42\*\* | .24\*\* | .10\* | .29\*\* | .48\*\* | .62\*\* | .28\*\* | .19\*\* | .37\*\* | .52\*\* |  - |  |  |
| 1. ADHD age 15
 | .24\*\* | .18\*\* | .16\*\* | .41\*\* | .29\*\* | .21\*\* | .18\*\* | .48\*\* | .36\*\* | .32\*\* | .39\*\* | .29\*\* | .69\*\* | .43\*\* | .34\*\* | .27\*\* | .32\*\* | .79\*\* | .39\*\* | .40\*\* | .43\*\* | .32\*\* |  - |  |
| 1. Defiance age 15
 | .24\*\* | .18\*\* | .15\*\* | .31\*\* | .34\*\* | .23\*\* | .17\*\* | .32\*\* | .39\*\* | .39\*\* | .25\*\* | .23\*\* | .44\*\* | .53\*\* | .41\*\* | .29\*\* | .20\*\* | .45\*\* | .60\*\* | .60\*\* | .40\*\* | .26\*\* | .57\*\* |  - |

 *Notes: \*\*p<.01, \*p<.05*

Supplementary Table 3. Moderation by child sex.

|  |  |  |
| --- | --- | --- |
|  | Concurrent Defiance | Concurrent ADHD |
|  | b (SE) | b (SE) |
| Between-person:  |  |  |
| Irritability | .69 (.05)\*\*\* | -1.69 (.55)\*\* |
|  Child sexa | -.24 (.06)\*\*\* | 2.20 (.54)\*\*\* |
|  Between-person irritability\*sex | -.19 (.06)\*\*\* | 1.49 (.58)\*\* |
| Depression | -.00(.01) | .19 (.05)\*\* |
| Anxiety | -.01 (.00) | .13 (.05)\*\* |
| Defiance | - | 4.84 (.37)\*\*\* |
| ADHD | .05 (.00)\*\*\* | - |
| Within-person:  |  |  |
| Irritability | 0.28 (0.03)\*\*\* | -.04 (.23) |
| Within-person irritability\*sex | -.19\*\* | .81 (.32)\* |
| Depression | .01 (.00)\*\* | .10 (.03)\*\*\* |
| Anxiety | .00 (.00) | .07 (.02)\*\*\* |
| Defiance | - | 1.86 (.19)\*\*\* |
| ADHD | .04 (.00)\*\*\* | - |
| Parent educationc  | -.03 (.06) | -.30 (.56) |
| Age centered | -.03 (.00) |  .13 (.03)\*\*\* |  |

*Notes: \*p<.05, \*\*p* < .01, *\*\*\*p* < .001; a: 0=male, 1=female; b: 0=neither parent with college degree, 1=at least one parent with 4-year college degree.

Supplementary Table 4. Moderation by lifetime parental depressive disorder.

|  |  |
| --- | --- |
|  | Concurrent Anxiety |
|  | b (SE) |
| Between-person:  |  |
| Irritability | .69 (.05)\*\*\* |
|  Parental depressive disordera | -2.38 (.66)\*\*\* |
|  Child sexb | -1.2 (.60)\* |
| Between-person irritability\* parental depression | -1.59 (.69)\* |
| Depression | .49 (.06)\*\*\* |
| Anxiety | - |
| Defiance | -1.32 (.48)\*\* |
| ADHD | .21 (.06)\*\*\* |
| Within-person:  |  |
| Irritability | 1.62 (.37)\*\*\* |
| Within-person irritability\* parental depression | -.92 (.49) |
| Depression | .31 (.03)\*\*\* |
| Anxiety | - |
| Defiance | .65 (.28)\* |
| ADHD | .11 (.04)\*\* |
| Parent educationc | -.06 (.64) |
| Age centered | -.04 (.05) |  |

*Notes: \*p<.05, \*\*p* < .01, *\*\*\*p* < .001; a: 0= present, 1=absent; b: 0=male, 1=female; c: 0=neither parent with college degree, 1=at least one parent with 4-year college degree.